

Substitute for form 1449-MPTG

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 13

Complete If Known

Application Number	
Filing Date	November 8, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-30

U.S. PATENT DOCUMENTS

Examiner Initials *	Doc No.	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Child Document	Pages, Columns, Lines, Where Relevant Paragraphs or Relevant Figure Appar.
		Number	Kind Code ² (if known)			
	A1	US-5,947,090		02-12-1994	Ranger	
	A2	US-5,483,869		02-03-1970	Elbertson et al	
	A3	US-5,581,899		07-06-1997	Cutler	
	A6	US-5,572,741		10-12-1997	Marshall	
	A5	US-5,651,242		03-21-1997	Everts	
	A9	US-5,770,046		05-01-1998	Seconos	
	A7	US-5,742,123		09-26-1973	Cohen	
	A8	US-5,895,091		04-16-1974	Cobb	
	A9	US-5,813,473		09-26-1974	Tymmsing	
	A10	US-5,878,748		04-22-1976	Spence	
	A11	US-5,859,869		05-18-1978	Elmrose et al	
	A12	US-5,802,945		06-15-1976	Croager et al	
	A13	US-5,074,921		03-28-1979	Heal	
	A14	US-4,989,897		03-26-1978	Ralanhangar	
	A15	US-4,117,414		09-28-1978	Moog	
	A16	US-4,128,742		10/31/1979	Deutch	
	A17	US-4,141,388		04-24-1979	Friske et al	
	A18	US-4,182,215		01-06-1980	Idon	
	A19	US-4,274,021		06-23-1981	Sweret	
	A20	US-4,318,977		03-09-1982	Toups	

- FOREIGN PATENT DOCUMENTS

Examiner Initials *	Doc No.	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Child Document	Pages, Columns, Lines, Where Relevant Paragraphs or Relevant Figure Appar.	1*
		Country Code ² - Number ³ - Kind Code ² (if known)					
	B1	EP 4 314 213-A1		12-15-1993	Synalab, Inc.		

Examiner
SignatureDate
Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformity with MPEP 608. Drawings thorough citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

* Applicant's unique citation designation number (optional). ¹ See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 601.04.² Other Office that issues the document, by the two-letter code (WIPO Standards ST 3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standards ST 19 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

Briefing Sheet Statement: This form is estimated to take 2-3 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES ON COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1462A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 13

Complete if known

Application Number
 Filing Date November 6, 2003
 First Named Inventor Lester F. Ludwig
 Group Art Unit
 Examiner Name
 Attorney/Doctel Number 2738-30

U.S. PATENT DOCUMENTS

Examiner Initials	File No.	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Paragraphs or Relevant Figure Number
		Number	- Kind Code (if known)			
✓	A21	US-4,385,853		12-28-1982	Clark, Jr. et al	
	A22	US-4,781,999		11-01-1988	Kode	
	A23	US-4,704,538		01-03-1989	Conigau, III	
	A24	US-4,707,616		01-10-1989	White	
	A25	US-4,852,444		08-01-1989	Hocover et al	
	A26	US-4,091,488		02-12-1991	Fate et al	
	A27	US-5,030,352		05-29-1991	Kellogg et al	
	A28	US-5,045,897		09-09-1991	Gurnat	
	A29	US-5,070,396		12-09-1991	Martel	
	A30	US-5,148,832		08-15-1992	Lui	
✓	A31	US-5,198,140		10-27-1992	Kingsman et al	
	A32	US-5,218,190		05-08-1993	Gros-De-Vergis	
	A33	US-5,229,123		08-09-1993	Rose et al	
	A34	US-5,262,885		11-16-1993	Baigens et al	
	A35	US-5,281,154		01-25-1994	Farnell et al	
	A36	US-5,289,888		03-08-1994	Tahara	
	A37	US-5,367,048		10-19-1994	Sigal	
	A38	US-5,478,850		01-06-1995	Tuckers	
	A39	US-5,445,077		08-08-1995	Wills	
	A40	US-5,443,168		08-15-1995	Garnier et al	

FOREIGN PATENT DOCUMENTS

Examiner Initials	File No.	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Paragraphs or Relevant Figure Number	Y*
		Country Code ¹	- Number ² - Kind Code ³ (if known)				

Examiner
Signature

Date
Considered

7/23/07

*EXAMINER: Initial if preliminary consideration, otherwise for final citation is in conformance with MPEP 806. Do not file through printer if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant is unique station designation number (optional). ² See Kind Code of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard 37.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbol as indicated on the document under WIPO Standard 37.18 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Source/How Statement: This form is estimated to take 2-6 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEE OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it carries a valid OMB control number.

සියලුම සේවා සහ වෙනත් විකල්ප

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Cheng	3	28	27
-------	---	----	----

Complete if Known

Application Number	
Filing Date	November 6, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Division Number	2738-30

U.S. PATENT DOCUMENTS

Electronic Media	Case File #	Collection Number(s)		Name of Institution or Archivist of Grant Document	Pages, Columns, Lines, Where Relevant, Paragraphs or Footnotes Excluded/Added
		Standard - Kimo Code (if Applicable)	Production Date NN-66-XXXX		
	A41	US-6-358,292	10-17-1980	White	
	A42	US-6-477,000	11-28-1981	Fujita et al.	
	A43	US-5-478,274	13-13-1983	Daffernico et al.	
	A44	US-5-805,041	10-15-1980	Grosvontum	
	A45	US-6-605,508	10-17-1980	Tumano	
	A48	US-6-838,140	08-19-1987	Wahr	
	A47	US-5-858-486	05-19-1987	Reotis et al.	
	A48	US-5,760,937	08-06-1987	Tani et al.	
	A49	US-5-868,538	08-16-1987	Hewitt et al.	
	A10	US-6-675,160	10-07-1987	Hewett	
	A51	US-8-741,993	04-21-1988	Kusumfornia	
	A52	US-5,793,008	05-08-1988	White	
	A53	US-5,798,540	06-08-1988	Whistland	
	A54	US-6,697,098	10-27-1988	Fry et al.	
	A45	US-6,050,051	12-15-1988	Madhaver et al.	
	A56	US-5,892,261	12-23-1988	Ito et al.	
	A57	US-6,902,827	08-03-1989	Osborne et al.	
	A58	US-6,969,263	10-19-1989	Looney et al.	
	A59	US-8,947,073	04-04-2000	Akoria et al.	
	A60	US-8,381,760	06-18-2000	Shoven, Jr.	

FOREIGN PATENT DOCUMENTS

[illegible]

2. **Expenses**
 3. **Income**

**Data
Consistent**

EXPLANATION: This is a reference to the fact that the information is confidential with respect to the company. The information is not to be disclosed to the public and is not to be used for any other purpose. The information is to be kept confidential and is not to be used for any other purpose.

² From Office that issued the document by the two-letter code (USPO Standard 87.3). For important national documents, the following are the most common:

the sign of the E-mail must precede the serial number of the patent document. * Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. If possible. * Applicant to also place a check mark here if English language Translation is submitted.

Sworn Hour Statement This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Civil Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it carries a valid OMB control number.

Substitute for form 1472A-P/T/O

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 4 of 13

C complete if Not Yes

Application Number
Filing Date November 6, 2003
First Named Inventor Lester F. Ludwig
Group Art Unit
Examiner Name
Attorney Docket Number 2738-30

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Chief Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)				
[Signature]	A01	US-6,100,461		08-08-2000	Hewlett	
	A02	US-6,140,565		10-31-2000	Yamauchi et al.	
	A03	US-6,204,441 B1		03-20-2001	Asahi et al.	
	A04	US-6,298,317 B1		09-11-2001	Wills	
	A05	US-6,310,279 B1		05-20-2001	Sabat et al.	
	A06	US-6,320,112 B1		11-20-2001	Lowe	
	A07	US-6,360,019 B1		09-19-2002	Crawford	
	A08	US-6,382,169 B1		03-26-2002	Phosede	
	A09	US-6,392,703 B1		08-21-2002	Chedoke	
	A10	US-6,404,089 B1		05-11-2002	Rhodes	

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Chief Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Y ³
		Country Code ⁴ , Number ⁵ , Kind Code ⁶ or Name					

Examiner Signature [Signature] Date Considered 7/23/07

*EXAMINER: Initial if reference considered whether or not citation is in accordance with MPEP 608. Draw line through citation if not in accordance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique document designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 601.04.

³ Enter Office that issued the document, by the two-letter code (WFO = European Patent Office). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WFO Standard 97, 1e if possible. ⁶ Applicant is to place a check mark here if English language translation is selected.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(fill in as many sheets as necessary)

Sheet 5

of 13

Complete if Known

Application Number	
Filing Date	November 6, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Amoray Docket Number	2738-30

OTHER PRIOR ART -- NON-PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume- issue number(s), publisher, city and/or country where published.	T ¹
No Date	C1	"Flex True Stereo Phono's," product description, Musician's Friend catalog.	
ABP	C2	"Korn's New Z-1 Helps Fiddler Keep His Funk", Music and Sound Retailer, Mar. 1998.	
No Date	C3	"Synaptics Targets Violon, Sound processing."	
MB	C4	"Yamaha VL1," advertisement, Electronic Musician, Apr. 1994.	
ABP	C5	APPELMAN, D. RALPH, The Science of Vocal Pedagogy, Theory and Applications, 1967, Indiana University Press, Bloomington, Indiana, USA.	
No Date	C6	NISSA-PEGEMER, BOX 19428, Stamford, CT, 06901-0428, USA.	
MB	C7	BICANIC, DANE, ed Photoacoustic and Photothermal Phenomena III, 1992, vol. 69, Springer-Verlag, Berlin Heidelberg, Germany.	
ABP	C8	BORMANS, JAN "MPEG-4 systems need specialized CPUs", Electronic Engineering Times, Jan. 25, 1998.	
	C9	Boss SE-79 Super Effects Processor Algorithm Guide, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90045-3606, USA.	
	C10	Boss OC-2 Stereo Memento: Roland Corporation, 7200 Dominion Circle, Los Angeles 90045-3606, CA, USA.	
	C11	Boss SE-79 Super Effects Processor Algorithm Guide, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90045-3606, USA.	

Examiner Signature	Date Considered
<i>[Signature]</i>	1/03/07

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional) ² Applicant is to place a check mark here if English language translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Continuation for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 6 of 13

Complete # Known

Application Number
Filing Date November 6, 2003
First Named Inventor Lester F. Ludwig
Group Art Unit
Examiner Name
Attorney Docket Number 2738-3D

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C12	Bose 65-70 Super-Clipsa Precision Owners Manual, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3656, USA	
	C13	CP-40 Pencil to Vinyl Converter, Roland, 7200 Dominion Circle, Los Angeles, CA 90040-3656, USA	
	C14	DMR-16 Digital Mixing Processor, Yamaha Corporation, P.O. Box 4, Hamamatsu, Japan	
	C15	OPM, Etronix, 185 Great Valley Parkway, Malvern, PA 19355, USA	
	C16	F-Data, Fast-Scan Products, P.O. Box 3312, 611 Ducommun St., Los Angeles, CA 90061, USA	
	C17	EPSTEIN, "The Search for New Chemical Oscillators," in Chemical Instabilities, Nicolis and Geras (eds.), 1934, O.Reidel Publishing, Dordrecht/Boston/Lancaster.	
	C18	EPSTEIN, IRVING R. "New Chemical Oscillators," Non-Equilibrium in Chemical Systems, 1964, Springer-Verlag, Berlin/Heidelberg, Germany	
	C19	Ernie Ball, Volume 2222, Musician's Friend Catalog	
	C20	Eric PETER, Letter to Editor, Experimenta: Musical Instruments, Jun. 1996	
	C21	EW13020, AKAI Corporation, Box 2344 Fort Worth, TX 76113, USA	
	C22	FIELD, RICHARD J., and NOYES, RICHARD M. "Oscillations in Chemical Systems IV Limit Cycle Behavior in a Model of a Real Chemical Reaction," J. Chem. Physics, Vol. 60, No. 5, Mar. 1974	

Examiner Signature	Date Considered
<i>[Signature]</i>	7/23/07

*EXAMINER: unless it is otherwise considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language translation is attached.

Search Hour Statement: This form is estimated to take 2-3 hours to complete. Time will vary depending upon the needs of the individual case. Any comments or the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20501. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20501.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it bears a valid OMB control number.

Substitute for form 1448A/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 7 of 13

Complete if Known

Application Number	
Filing Date	November 8, 2003
First Named Inventor	Leister F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-35

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue number(s), publisher, city and/or country where published.	1
	C25	GA-10 Guitar Amplifiers, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040, 1996, USA.	
<i>W</i>	C26	GRAY, PETER, and SCOTT, STEPHEN K. "Chemical Oscillations and Instabilities," 1990, Clarendon Press, Oxford, Great Britain.	
	C28	GSP 21 LEGEND Protocol, 8760 South Sandy Parkway, Sandy, UT 84070, USA.	
<i>W</i>	C28	GZOWSKI, JOHN "Bosnis and Sympathetic", Experimental Musical Instruments, July 1997, vol. 12, No. 4.	
<i>W</i>	C29	HARA, YOSHIKO "Matsushita demos multilayer MPEG-4 compression", Electronic Engineering Times, Apr. 19, 1999.	
<i>W</i>	C28	JOHNSON, COLIN "Computer program recognizes facial expressions", Electronic Engineering Times, Apr. 12, 1999.	
<i>W</i>	C29	JOHNSON, COLIN "Image sensor tracks moving objects in hardware", Electronic Engineering Times, Apr. 5, 1999.	
<i>W</i>	C30	Kuoss and dynamic effect/controllor, Korg Preview Users' magazine, Summer 1999.	
	C31	KING and WHITE, "Focal-Sensing Array Based on Forming and Detecting an Optical Image," UC Berkeley Preprint.	
<i>W</i>	C32	KURAMOTO, YOSHIOKI "Rhythms and Turbulence in Populations of Chemical Oscillators", Physica SCSA (1981), pp. 128-143, North-Holland.	
<i>W</i>	C33	LEIBERMAN, DAVID "Software goes on a search-and-locate mission", Electronic Engineering Times, Jan. 25, 1999, pp. 44.	

Examiner Signature	Date Considered
<i>Walter E. [Signature]</i>	7/23/03

EXAMINER'S Initial if reference substantiated, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Indicate copy of file with name communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language translation is attached.

Burden of Statement: This form is estimated to take 2-3 hours to complete. Time will vary depending upon the needs of the individual case. Any correspondence on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449/PTO <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center;">(use as many sheets as necessary)</p>		<h3 style="text-align: center;">Complete if Known</h3> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td style="width: 50%;"></td> </tr> <tr> <td>Filing Date</td> <td>November 6, 2003</td> </tr> <tr> <td>First Named Inventor</td> <td>Lester F. Ludwig</td> </tr> <tr> <td>Group Art Unit</td> <td></td> </tr> <tr> <td>Examiner Name</td> <td></td> </tr> <tr> <td>Attorney Docket Number</td> <td>2738-30</td> </tr> </table>		Application Number		Filing Date	November 6, 2003	First Named Inventor	Lester F. Ludwig	Group Art Unit		Examiner Name		Attorney Docket Number	2738-30
Application Number															
Filing Date	November 6, 2003														
First Named Inventor	Lester F. Ludwig														
Group Art Unit															
Examiner Name															
Attorney Docket Number	2738-30														
Sheet	1	of	13												

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue number(s), publisher, city and/or country where published	T ‡
[Signature]	C34	LEIBERMAN, DAVID "Touch screens extend grasp into consumer realm" Electronic Engineering Times, Feb. 5, 1999.	
	C38	Light Wave Systems, RUSG Office, Santa Barbara, CA, USA	
[Signature]	C36	LIA, AGRAWAL, and NEKLUDOVA "A Fast Algorithm for Labeling Connected Components in Image Arrays", Technical Report Series, No. NA85-2, Thinking Machines Corp., 1986 (rev. 1987), Cambridge, Mass., USA.	
	C37	IBM 110-3001 Tachist Array Scanner, Lord Corp., Inf. Aut. Div., 407 Gregson Dr., PO Box 8290, Cary, NC, 27511-6290, USA.	
[Signature]	C35	LUDWIG, L., "A Generalized Linear Amplitude Processor," Electronics, Dec. 1979, vol. 11, No. 128.	
[Signature]	C39	LUDWIG, L., "A Square-Wave Frequency-Division Sub-Octave Cross-Product Module," Electronics, Feb. 1979, Vol. 11, No. 98.	
[Signature]	C40	LUDWIG, L., "GLAP Revisited," Electronics, Jul. 1981, vol. 13, No. 127.	
[Signature]	C41	LUSHER, E. (unk) "Photoacoustic effect principles and applications: proceedings of the First International Conference on the Photoacoustics," 1984, Vienna.	
	C42	MIDI Player MP-88-Middlem, Max-Habbe-Strasse 1 85716 Unterschleißheim, Germany 0049-60-3-10-61-58.	
[Signature]	C45	MOOG, ROBERT A. "The Human Finger-A Versatile Electronic Music Instrument Component", Audio Engineering Society Preprint, 1977, New York, NY, USA.	
	C46	MS4-M53 Soliton-Memori lab. dist. By Bell Doreux Corp. 128 Rt. 300, 10994 W. Nyack, NY, USA.	

Examiner Signature	[Signature]	Date Considered	7/23/07
--------------------	-------------	-----------------	---------

*EXAMINER: initial if reference considered, name if not citation is in accordance with MPEP 808. Draw file through citation if not in conformance and not considered. Include copy of file form with next communication to applicant.

† Unique citation designation number (optional). ‡ Applicant is to place a check mark here if English language translation is attached.

† Under Hour Statement: This form is estimated to take 2.5 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on this amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 9 of 13

Complete if Known

Application Number	
Filing Date	November 6, 2003
First Named Inventor	Lester F. Ludwig
Group A4 Unit	
Examiner Name	
Attorney Docket Number	2738-30

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
<i>[initials]</i>	C45	MURPHY, AAMODT, Spicer and Royce (eds) Photocatalytic and Photochemical Phenomena II, 1990, vol. 92, Springer-Verlag, Berlin Heidelberg, Germany.	
<i>[initials]</i>	C46	NAGY-UNGVARAI, Z. and HESS, BENNO "Control of Dynamic Pattern Formation in the Belousov-Zhabotinsky Reaction" Physics D (1991) North-Holland.	
<i>[initials]</i>	C47	NICOLIS, G and BAHAR, F (eds.), Chemical Instabilities, 1984, D.Reidel Publishing, Dordrecht/Bos-ton/Lancaster.	
<i>[initials]</i>	C48	NICOLIS, G., "Nonlinear Phenomena in Chemistry", Introduction to Nonlinear Science, 1988, Cambridge University Press, Great Britain.	
<i>[initials]</i>	C49	Omnichord OM-250m, Suzuki, Box 267393, San Diego, CA 92195, USA.	
<i>[initials]</i>	C50	OHBAW, M., KURIN-CBORGEI, K., ZHABOTINSKY, A. and KUSTEIN, I., "New Indicators for Visualizing Pattern Formation in Uncatalyzed Bromate Oscillatory Systems", J. Am. Chem. Soc. 1990, Vol. 112, pp. 1146-1150.	
<i>[initials]</i>	C51	PC-1600 MIDI Controller, Peasey Corporation, 711 A St. Meriden, MS 39302-2808, USA.	
<i>[initials]</i>	C52	PENNYWITT, KIRK "Robotic Tactile Sensing," Byte, Jan., 1988.	
<i>[initials]</i>	C53	PLM 8128E, Peasey, Corporation, 711 A St. Meriden, MS 39302-2808, USA.	
<i>[initials]</i>	C54	PMC10 Program, MIDI Pad Controller, English, Salt Lake City, UT, USA.	
<i>[initials]</i>	C55	Review of KORG X-230 Drum (also called "Wave Drum"), Electronic Musician, Apr. 1994.	

Examiner Signature	Date Considered
<i>[Signature]</i>	7/23/07

¹EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Indicate copy of use form with next communication to applicant.

²Unique citation designation number (optional). ³Applicant is to place a check mark here if English language Translation is attached.

Briefing Hour Statement: This form is estimated to take 2-3 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patent, Washington, DC 20231.

Substitute for form 1462A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>		Complete if Known <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td style="width: 50%;"></td> </tr> <tr> <td>Filing Date</td> <td>November 6, 2003</td> </tr> <tr> <td>First Named Inventor</td> <td>Lester F. LuRwig</td> </tr> <tr> <td>Group Art Unit</td> <td></td> </tr> <tr> <td>Examiner Name</td> <td></td> </tr> <tr> <td>Attorney Docket Number</td> <td>2738-30</td> </tr> </table>		Application Number		Filing Date	November 6, 2003	First Named Inventor	Lester F. LuRwig	Group Art Unit		Examiner Name		Attorney Docket Number	2738-30
Application Number															
Filing Date	November 6, 2003														
First Named Inventor	Lester F. LuRwig														
Group Art Unit															
Examiner Name															
Attorney Docket Number	2738-30														
Sheet	10	of	15												

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Y [†]
<i>LS</i>	C96	RICH, ROBERT "Buckle Lightning MIDI Controller", Electronic Musician, Oct. 1991.	
<i>LS</i>	C97	RICH, ROBERT "Buckle Thunder", Electronic Musician, Aug. 1990.	
<i>LS</i>	C98	ROADS, C., "A Tutorial on Non-linear Distortion or Waveshaping Synthesis," Computer Music Journal, Vol. 3, No. 2, pp. 29-34, June 1979, People's Computer Company, Menlo Park, CA, USA.	
<i>LS</i>	C99	Yamaha WX11 and WT11, MIDI Magazine Mar/Apr. 1994 Yamaha Corp. of America, 6600 Orangethorpe Ave., P.O. Box 6600 Buena Park, CA 90622-6600, 714 522-9411.	
	C80	Roland's COSM: A WHOLE NEW WORLD OF SOUNDS, Computers & Music, Roland Users' Magazine, 7200 Dominion Circle, Los Angeles, CA 90040-3698, USA.	
<i>LS</i>	C81	RONSE, CHRISTIAN and DEVLIVER, PIERRE A., Connected Components in Binary Images: the Detection Problem, 1984, Research Studies Press/ John Wiley & Sons Inc., New York, NY, USA.	
	C82	RSP-550 Algorithm Guide: Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3698, USA.	
	C83	RSP-550 Owners Manual: Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3698, USA.	
<i>LS</i>	C84	RUOFF, P. "How Bromate Oscillators Are Controlled", Ann. Chem. Society, 1988.	
	C85	Sentient Six digital guitar interface, PASSAC, Milpitas, CA 95035, USA.	
	C86	DGE MACH II, Applied Research and Technology, 215 Tremont St., Rochester, NY 14608, USA.	

Examiner Signature	<i>W. H. H. H.</i>	Date Considered	7/23/07
--------------------	--------------------	-----------------	---------

* EXAMINER: Initial if references considered, neither or not citation is in accordance with MPEP 608. One line through others if not in conformance and not considered. Indicate copy of this form with next communication to applicant.

[†] Unique citation designation number (optional). * Applicant is to place a check mark here if English language translation is attached.

Sendin Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	
(use as many sheets as necessary)		Filing Date	November 6, 2003
		First Named Inventor	Leslie F. Ludwig
		Group Art Unit	
		Examiner Name	
Sheet 11	of 13	Attorney Docket Number	2738-30

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue number(s), publisher, city and/or country where published.	T ¹
24	C07	SHAPRO, LARRY S. Affine Analysis of Image Sequences, 1995, Press Syndicate of the Cambridge University Press.	
24	C08	SLAWSON, WAYNE. Sound Color, 1986, University of California Press, Berkeley, CA, USA.	
24	C09	SNEEL, JOHN M. "Sensors for Playing Computer Music with Expression", Proceedings of the Intl. Computer Music Conf. at Eastman, 1992.	
	C10	Switchblade 15, Square Signature, 5741 Arapahoe Rd. Ste. 2a Boulder, CO 80303, USA.	
	C11	Symphonia, Softwind Instruments, 304 Newbury St. Ste. 323, Boston, MA 02115, USA.	
24	C12	Tactile sensors and the gripping challenge, IEEE Spectrum Aug. 1995.	
	C13	The Fretless Wizard, Blaxe, P.O. Box 15436, Stanford, CA 94301-0436, USA.	
	C14	Trilogy, Hipshot Music Prods. Van Nuys, NY, USA.	
	C15	TYSON, JOHN J., The Balinese Gamelan Reunion, Springer-Verlag, Berlin-Heidelberg, Germany.	
	C16	Unlocking the Secrets of FIRM (Firmware Reverse Engineering Modeling), Craig Anderton, Roland Users Magazine, 7500 Dominion Circle, Los Angeles, CA 90045-9944, USA.	
	C17	Various 80 Tracing Products, Ascension Technology Corporation, P.O. Box 527, Burlington, VT 05402, USA.	

Examiner Signature		Date Considered	7/23/07
--------------------	--	-----------------	---------

EXAMINER: Initial 4 reference considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Indicate only if one form with next communication to applicant.

¹ Unique citation designator number (optional). ² Applicant is to place a check mark item if English language translation is attached.

Budget Hour Statement: This form is estimated to take 2-4 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Submitter per form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	
(Use as many sheets as necessary)		Filing Date	November 6, 2003
Sheet 12 of 13		First Named Inventor	Lester F. Ludwig
		Group Art Unit	
		Examiner Name	
		Attorney Docket Number	2736-30

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume- issue number(s), publisher, city and/or country where published	T ²
<div style="font-size: 1.5em; font-weight: bold;">OK</div>	D16	VERNER, J. <i>Artif Start Switch Company Ztar 824-D</i> , <i>Electronic Musician</i> , Nov. 1984	
	D19	VG-8 Users Manual, <i>Roland Corporation</i> , 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.	
<div style="font-size: 1.5em; font-weight: bold;">OK</div>	D69	VIBERG, MATS, <i>Subspace Firing Concepts in Sensor Array Processing</i> , Linköping Studies in Science and Technology, 1988, Dissertations No. 27 Linköping, Sweden.	
<div style="font-size: 1.5em; font-weight: bold;">OK</div>	C61	VIOINTIN, A. <i>tes</i> , <i>Models of Hysteresis</i> , Longman Scientific & Technical 1993, Harlow, England.	
<div style="font-size: 1.5em; font-weight: bold;">OK</div>	C62	WANG, K.-J. and NICOLIS, G. "Bifurcation Phenomena in Coupled Chemical Oscillators: Normal Form Analysis and Numerical Simulations", <i>Physica 28D</i> (1987), pp. 140-155, North-Holland, Amsterdam.	
<div style="font-size: 1.5em; font-weight: bold;">OK</div>	C63	WESSEL, C. "A Tutorial on Non-linear Oscillation or Wave-shaping Synthesis", <i>Computer Music Journal</i> , Jun. 1978, Vol. 3, No. 2, pp. 28-34, People's Computer Company, Menlo Park, CA, USA.	
<div style="font-size: 1.5em; font-weight: bold;">OK</div>	C64	WILKINSON, SCOTT "SynchroVoice MidVox", <i>Electronic Musician</i> , Jul. 1992.	
<div style="font-size: 1.5em; font-weight: bold;">OK</div>	C65	WINCKEL and FRITZ, <i>Music Sound, and Sensation: A Modern Exposition</i> , 1967, Dover, New York, USA.	
	C66	Wind Machine, <i>Analog, Creative Technology</i> , 290 Brookbank Ave., B.C. Canada V7J-1G9	
	C67	ZTAR Midi Fingerboard Controllers: <i>STAR TRIM</i> 1717 Fifth Ave., San Diego, CA 92101, USA.	
	C68	K50R Ai2 Synthesizer Module, <i>KORG</i> , Suganuma, Tokyo, Japan.	

Examiner Signature		Date Considered	7/23/04
--------------------	--	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 604. Draw the through citation if not in conformance and not considered. Include copy of this form after next communication is applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language translation is attached

Search Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any statements on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20221. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1-4384770

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

പ്രതിരോധം കൂട്ടിയില്ലെന്ന് വാദിക്കുകയും ചെയ്തു.

Steel 13 of 13

Complete if Known

Application Number	
Filing Date	November 8, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-20

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

[illegible]

Examiner Signature	<i>Mark D. Dill</i>	Date Considered	<i>7/23/05</i>
-----------------------	---------------------	--------------------	----------------

EXAMPLE: If an individual is referenced, whether or not citation is in conformance with NIST 800. Draft this through citation if not in conformance and not conformed. Include copy of this item with next communication to applicant.

¹ Unique design designation number (optional). ² Applicant is to place a check mark here if English Language Translation is attached.

Survey Your Statement. This form is estimated to take 20 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patent, Washington DC 20231.**